

and more prominent black veins than either of those species. On the under side it differs from *haitensis* in the broad black border of the primaries and the dark red-brown color of the secondaries with the prominent black anal spot; from *radians* it differs on the under side in the ground color and the lack of the pale veins.

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### **Cerambycinae from Kartabo, Bartica District, British Guiana (Coleop.)**

By SAMUEL H. WILLIAMS, University of Pittsburgh.

In the joint collections of the writer and the New York Zoological Society, the Cerambycinae are represented by twenty-five genera, and thirty-seven species. Additional species taken at other places in British Guiana are not included in this list, which is only a contribution to the Kartabo fauna, which has been so intensively studied by Dr. William Beebe and his associates. Material collected in the hinterland of British Guiana and in the other Guianas indicates a wide diversification and distribution of coleopterous insects in the region between the Amazon and Orinoco rivers, with a localization of certain species, and an extensive range characterizing others. Most of the work done in this region has been more or less scattered with the emphasis having been placed on Central American, Amazonian and Cayenne<sup>1</sup> faunae. British Guiana connects these regions and offers untold possibilities in distributional studies.

The writer has spent considerable time in an attempt to make an intensive, systematic survey of the Coleoptera of the lower jungle area in British Guiana and in an endeavor to obtain some information as to the effects of altitude on the general distribution of species. Specimens collected between the coastland and Mt. Roraima, which is a considerable distance back of Kaieteur Falls, show that some of the species taken at Kartabo are quite generally distributed, while other species are confined to the narrow strip of dense jungle along the coastal lowlands.

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<sup>1</sup> French Guiana.

Within certain species, having a wide range, there seems to be considerable variation and in one or two cases the identities listed here are not absolutely certain. There is some justification for creating varieties and subspecies but, inasmuch as the types were not available and because of the fact that the original descriptions are frequently so inadequate, the observed differences do not appear to the writer as being of sufficient value for the creation of new species. To avoid additional synonyms, the writer has decided to allow the listed identities to stand until the opportunity is presented to compare the specimens with more examples, although the identified list has already been checked against collections in England, Germany, France, Austria, and Czechoslovakia.

Studies in this section of South America reveal the need of monographic works on the numerous genera described from the region. Most of the generic descriptions are contained in very early works which are not accessible to the average student and the lack of generic keys makes it necessary to plough through endless volumes of descriptions in order to properly locate collected specimens. In the numerous museums visited by the writer, myriads of Coleoptera collected in South America are not identified. To assume that the majority of these are new species would be a serious mistake, because, while the fauna is large, much work on the beetles of the region has been done by Olivier, Fabricius, Thomson, Serville, Chevrolat, Gounelle, Bates and others.

As indicated in previous papers on the Coleopterous fauna of British Guiana by the writer,<sup>2</sup> the present list is not presented as complete but is given only as a contribution to our knowledge of the Kartabo region.

British Guiana is a fertile field for investigations. The pleasure of studies in the magnificent jungles is greatly en-

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<sup>2</sup>Williams, Samuel H.—A List of Prionid Beetles Taken at Kartabo, Bartica District, British Guiana with the Description of a New Species. *Annals of the Carnegie Museum*, Volume XIX, Number 2, 1929.

The Cicindelidae at Kartabo, Bartica District, British Guiana.—*ENT. NEWS*, Volume XL, Number 6, June 1929.

Eine Neue Oreodera Art aus Sudamerika. *Deutsch. Entom. Zeitsch.* heft 3 1928.

hanced by the cooperation of the public-spirited officials of the country and the Department of Science and Agriculture which incorporates a staff of well-trained and broadminded scientists of the highest character.

The writer wishes to thank Professor Dr. Ferdinand Pax of The Zoologisches Institut und Museum der Universität in Breslau; Professor Doctor H. Kuntzen of the Zoologisches Museum in Berlin and Doctor W. Arndt of the Berlin Museum, for their assistance in securing necessary literature. He is also indebted to Mr. G. K. Arrow and Major Austen of the British Museum for courtesies extended. The New York Zoological Society collections were made available through the kindness of Dr. William Beebe, from whom the writer has been the recipient of many friendly favors.

The nomenclature used in this list is according to the Junk-Schenkling Catalogus Coleopterorum, part 39, representing the list made by Aurivilius.

#### Family CERAMBYCIDAE.

##### Sub family CERAMBYCINAE.

- |  |                                 |
|--|---------------------------------|
| Group II. DISTENIINI.  | Group XIV. CERAMBYCINI.         |
| Genus <i>Distenia</i> Serv.  | Genus <i>Hamaticherus</i> Serv. |
| <i>D. bicolor</i> Thomson.   | <i>H. batus</i> Linn.           |
| Group XI. ACHRYSONINI.   | <i>H. castaneus</i> Bates.      |
| Genus <i>Achryson</i> Serv.  | <i>H. lacordairei</i> Gah.      |
| <i>A. surinamum</i> Linn.  | <i>H. plicatus</i> Oliv.        |
| Group XII. TORNEUTINI.   | <i>H. rugosus</i> Oliv.         |
| Genus <i>Torneutes</i> Reich.  | Genus <i>Sphallenum</i> Bates.  |
| <i>T. lansbergei</i> Thoms.  | <i>S. robustum</i> Bates.       |
| Group XV. HESPEROPHANINI.  | Genus <i>Chlorida</i> Serv.     |
| <i>C. festiva</i> Linn. An extremely abundant species attracted to lights at night. Of the hundreds of specimens of <i>Chlorida</i> taken, only one specimen of <i>C. denticulata</i> was found. |                                 |
| <i>C. denticulata</i> Buquet.  |                                 |
| Group XVI. EBURIINI.   | <i>E. 6-guttata</i> Lameere.    |
| Genus <i>Eburodacrys</i> Thoms.  | <i>E. sex maculata</i> Oliv.    |
| Group XVIII. SPAHERIONINI.   | Genus <i>Peribocum</i> Thoms.   |
| <i>P. pubescens</i> Oliv.  |                                 |

It is difficult to distinguish among several related genera here because of rather inadequate generic descriptions. Thomson's description of the genus *Peribocum* says "Thorax strongly

tubercled on the sides in both sexes, thinly clothed with long hairs. Antennae hairy, with distinct spines externally at the end of each segment and with two spines on the terminal segment, the external spine being the smaller. Femur swollen and club like, spineless and with a short peduncle at the base. Middle coxal cavities open on the outside. Femur and tibia smooth, more or less clothed with bristle-like or silken hairs."

Thomson states that the thorax carries a spine but in most species the structure is a conical tubercle, even in the types of this genus. Gounelle<sup>3</sup> insists that the above formula is too rigid for the members of the genus and indicates that certain species lack the two terminal spines on the antennae while others, although the elytra are smooth and shining, have the head, thorax and ventral side of the body covered with a thin pubescence.

*Peribocum* is apt to be confused with *Stizocera*, *Sphaerion* and *Nephalius*. It may be distinguished from these in the following manner:

- (1) Middle coxal cavities closed on the outside, femur spiny  
—*Stizocera* Serv.
- (2) Middle coxal cavities open on the outside, femur without spines—3.
- (3) Elytra smooth and shining; thorax furnished on each side with a prominent tubercle in both sexes, rarely spiny  
—*Peribocum* Thoms.
- (4) Sides of the thorax rounded and punctuated in the same manner at the sternum of the male, thin and tubercular in the male; antennae without or with very small and inconspicuous spines in the male  
—*Sphaerion* Serv.
- (5) Thorax bearing a series of small conical tubercles on each side in both sexes, frequently without sexual punctuation; spines of the antennae longer and more numerous in the male  
—*Nephalius* Newman.

Genus <i>Pantonyssus</i> Bates.	Group LVI. RHINOTRAGINI.
<i>P. nigriceps</i> Bates.	Genus <i>Omata</i> White.
Genus <i>Mallocera</i> Serv.	<i>O. elegans</i> White.
<i>M. glauca</i> Serv.	Genus <i>Acyphoderes</i> Serv.
Group XX. IBIDIONINI.	<i>A. abdominalis</i> Oliv.
Genus <i>Ibidion</i> Serv.	Genus <i>Odontocera</i> Serv.
<i>I. maronicum</i> Thoms.	<i>O. fasciata</i> Oliv.
Group XXII. CALLIDIOPINI.	Group LXV. CALLICHROMINI.
Genus <i>Cylindera</i> Newman.	Genus <i>Callichroma</i> Lat.
<i>C. flava</i> Fab.	<i>C. vittatum</i> Fab.

<sup>3</sup>Gounelle—Listes des Cerambycides de la region de Jatahy, etat de Goyaz Brazil. Ann. Ent. Soc. France LXXVII, 1909.

C. auronicum Linn.	Group LXXXIV.
Group LXVI. CAMPSOCERINI.	STERNACANTHINI.
Genus Orthoschema Thoms.	Genus Sternacanthus Serv.
O. albicorne Fab.	S. undatus Oliv.
Group LXIX. CLYTINI.	Genus Batus Thunb.
Genus Neoclytus Thoms.	B. barbicornis Linn.
N. rufus Oliv.	B. hirticornis Gyllh.
Genus Mecometopus Thoms.	Genus Ceragenia Serv.
M. jansonii Bates.	C. bicornis Fab.
Group LXXV.	Group LXXXV.
RHOPALOPHORINI.	PTEROPLATINI.
Genus Cosmisoma Serv.	Genus Pteroplatus Buquet.
C. ammiralis Linn.	P. lycoides Guer.
Group LXXVII.	Group LXXXVII.
HETEROPSINI.	TRACHYDERINI.
Genus Chrysoprasis Serv.	Genus Trachyderes Dalm.
C. auricollis Dalm.	T. melas Bates.
C. festiva Serv.	T. succintus Linn.
	T. bicolor Voet.

The collection will be placed at the disposition of the New York Zoological Society.

### Oligolectic Andrenidae (Hymen.).

Lately Cockerell says: "Graenicher, in his Wisconsin list, catalogues five species of *Andrena* which gather pollen from *Salix*, ten from the Compositae, four from Umbelliferae, and one each from *Claytonia virginica*, *Hydrophyllum*, *Geranium maculatum*, *Fragaria*, and *Parnassia*."

Graenicher (1905) gave a list of 13 species which were the same as those recorded in my local list of 21 species (1899) and added 11 species (2 erroneous and 2 doubtful). What he contributed to my list was one species from *Salix*, five from Compositae, one from Umbelliferae, and one each from *Fragaria* and *Parnassia*. And this list would not have been published if it had not been preceded by that of 1899.

My local list of local oligolectic bees (Ecology 7:378-9, 1926) shows 9 Andrenidae oligoleges of *Salix*, 8 of Compositae, and one each of Cruciferae, Umbelliferae, *Aruncus sylvester*, *Claytonia virginica*, *Geranium maculatum*, *Nothoscordum bivalve*, *Polemonium reptans* and *Viola*. *Andrena geranii* and *nasonii*, given in my first list, are not oligoleges of *Hydrophyllum* and Umbelliferae.—CHARLES ROBERTSON, Carlinville, Illinois.